

Application No.: 10/716,568

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REMARKS

Claims 1-39 are active and pending in the present application; all of which stand rejected.

Claims 14-26 stand rejected under 35 U.S.C. § 101 and claims 1-39 stand rejected under 35 U.S.C. § 103 as unpatentable over Van Hook (US Patent No. 6,266,758) in view of Song (US Patent 5,991,531). It appears that claims 27-39 also stand rejected under 35 U.S.C. § 101.

Rejection under 35 U.S.C. § 101

The Examiner has rejected Claims 14-39 as directed to non-statutory subject matter under 35 U.S.C. § 101. According to the Examiner, the claims are directed to a “medium” or “signal” that is not tangible and therefore not statutory subject matter. Applicants respectfully disagree. The Examiner bears the *prima facie* burden of establishing that the claims are not directed to patentable subject matter. See MANUAL OF PATENT EXAMINING PROCEDURES (“MPEP”) § 2106.

The breadth of subject matter appropriate for patenting is extraordinarily broad: statutory subject matter encompasses “anything under the sun that is made by man.” See id. (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 308-09 (1980)) (emphasis added). For this reason, the Federal Circuit has strongly cautioned against reading unwritten limitations into section 101:

The repetitive use of the expansive term “any” in § 101 shows Congress’s intent not to place any restrictions on the subject matter for which a patent may be obtained beyond those specifically recited in § 101. Indeed, the Supreme Court has acknowledged that Congress intended § 101 to extend to “anything under the sun that is made by man.” Thus, it is improper to read limitations into § 101 on the subject matter that may be patented where the legislative history indicates that Congress clearly did not intend such limitations.

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See State Street Bank & Trust Co. v. Signature Financial Group, Inc., 149 F.3d 1368, 1373 (Fed. Cir. 1998) (internal citation and footnote omitted) (emphasis added). Thus, the proper threshold inquiry under section 101 is whether the claimed subject matter was man made. Here, the Examiner has imported into section 101 a requirement that conflicts with the guiding principle that “anything under the sun that is made by man” is patentable subject matter. It is beyond dispute that the “computer-readable medium”¹ and “computer data signal, embodied in a transmission medium”² recited in Claims 14–39 are “made by man.”

Consistent with the extensive scope of section 101, the MPEP recognizes that the only types of subject matter not eligible for patenting are abstract ideas, laws of nature and natural phenomena:

The subject matter courts have found to be outside the four statutory categories of invention is limited to abstract ideas, laws of nature and natural phenomena. . . . These three exclusions recognize that subject matter that is not a practical

¹ For example, independent Claim 14 from which Claims 15–26 each depend recites:

14. A computer-readable medium having instructions that cause a computer to perform operations, the instructions comprising: an instruction that operates on a plurality of data elements in partitioned fields of at least one register to produce a catenated result; an aligned instruction operable to copy first data according to an aligned memory address, the first data having a data width, the data width specified as a fixed value by the aligned instruction, the aligned memory address being one of a plurality of memory addresses regularly spaced by the data width; and an unaligned instruction operable to copy second data according to an unaligned memory address, the second data having the data width, the data width specified as a fixed value by the unaligned instruction, the unaligned memory address being a memory address that is not constrained to be one of the plurality of memory addresses regularly spaced by the data width.

² For example, independent Claim 27 from which Claims 28–39 each depend recites:

27. A computer data signal, embodied in a transmission medium, the computer data signal having instructions that cause a computer to perform operations, the instructions comprising: an instruction that operates on a plurality of data elements in partitioned fields of at least one register to produce a catenated result; an aligned instruction operable to copy first data according to an aligned memory address, the first data having a data width, the data width specified as a fixed value by the aligned instruction, the aligned memory address being one of a plurality of memory addresses regularly spaced by the data width; and an unaligned instruction operable to copy second data according to an unaligned memory address, the second data having the data width, the data width specified as a fixed value by the unaligned instruction, the unaligned memory address being a memory address that is not constrained to be one of the plurality of memory addresses regularly spaced by the data width.

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application or use of an idea, a law of nature or a natural phenomenon is not patentable.

MPEP 2106 (emphasis in original). The Examiner has not sought to—and presumably recognizes that it would be improper to—characterize the subject matter of the rejected claims as abstract ideas, laws of nature and natural phenomena. Nor could the Examiner reasonably assert that the claimed “computer-readable medium” and “computer data signal, embodied in a transmission medium” do not have a practical use or application.

Although the patentability of software was at one time undecided, the courts and the PTO have resolved this issue. Indeed, the MPEP specifically recognizes the propriety of claiming a “computer-readable medium” that contains “functional descriptive material” such as software:

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized.

See MPEP § 2106 (emphasis added). This same rationale is pertinent here: in Claims 14–26, the software instructions are embodied in the “computer-readable medium” and the nature of the “computer-readable medium” enables the function of the software materials to be realized.

Although Applicants located no court case that directly addresses the subject matter issue for claims to a “computer-readable medium,” the Federal Circuit’s recent decision in *Schumer v. Laboratory Computer Sys., Inc.*, 308 F.3d 1304 (Fed. Cir. 2002) is instructive. Like the “computer-readable medium” recited in rejected Claims 14–26, one of the claims in *Schumer* recited “[a] computer readable medium containing a computer program which program causes a computer to perform the method of claim 13.” See id. at 1308 (emphasis added). Importantly, neither the parties nor the court in *Schumer* even suggested that the claim was improper subject matter. See id. To the contrary, the issues in that case related to whether the claims were infringed or rendered invalid by the prior art. See id. at 1310–17. Thus, both the parties and the

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court implicitly assumed that the claim to a “computer readable medium” was proper subject matter under section 101.

The Examiner’s rejection of Claims 27–39 under section 101 is similarly misplaced. Like the “computer-readable medium” claims, the claims reciting a “computer data signal, embodied in a transmission medium” satisfy the general “made by man” rule and do not fall into one of the three excluded categories (*i.e.*, abstract ideas, laws of nature and natural phenomena). Moreover, these claims also involve “functional descriptive material” that is recorded on a “computer-readable medium” and therefore further satisfy the rationale of MPEP § 2106. In addition, the MPEP also explicitly provides that “a signal claim directed to a practical application of electromagnetic energy is statutory regardless of its transitory nature.” See MPEP 2106. Thus, the patentability of these claims does not turn on the specific nature of the transmission medium.

Claims 14–39 recite subject matter that is “made by man” and is not excluded from patentability as abstract ideas, laws of nature or natural phenomena. Furthermore, the claimed subject matter falls within categories recognized as patentable by the Federal Circuit and MPEP. Because the claimed subject matter is statutory under section 101, Applicants respectfully request that the Examiner withdraw the section 101 subject matter rejections.

Rejection under 35 U.S.C. § 103

Regarding the obviousness rejections, the primary Van Hook reference does not qualify as prior art to the pending claims, because the present application claims priority back to the August 16, 1995, filing date of U.S. Patent No. 5,742,840 (the ‘840 patent), as indicated by the priority claim, which is hereby reproduced for the convenience of the Examiner:

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"This application is a continuation of U.S. Patent Application No. 10/646,787, filed August 25, 2003, which is a Continuation of U.S. Patent Application No. 09/922,319, filed August 2, 2001, which is a Continuation of U.S. Patent Application No. 09/382,402, filed August 24, 1999[, now U.S. Patent No. 6,295,599], which claims the benefit of priority to Provisional Patent Application No. 60/097,635 filed August 24, 1998, and is a continuation-in-part of U.S. Patent Application No. 09/169,963, filed October 13, 1998, now U.S. Patent No. 6,006,318, which is a continuation of U.S. Patent Application No. 08/754,827, filed November 22, 1996 now U.S. Patent No. 5,822,603, which is a divisional of U.S. Patent Application No. 08/516,036, filed August 16, 1995 now U.S. Patent No. 5,742,840."

Support for all the pending claims is found in the disclosure of the '840 patent. Van Hook's filing date was March 5, 1999, more than one year later than the August 15, 1995 filing date of the '840 patent. Therefore, Van Hook is not prior art to the claims of the present application.

As the priority claim states, U.S. Patent 6,295,599 ("the '599 patent") is in the direct chain of priority for the present application. Applicants note that various amendments were made to the specification of the '599 patent for submission as the specification of the present application. However, no new matter was added, since the amendments to the specification were made exclusively by inserting materials from the appendix of the '599 patent ("the '599 appendix"). The '599 appendix is (a) attached as an appendix in microfiche form in the '599 patent, (b) attached in CD-ROM format and incorporated by reference in U.S. Patent Application No. 10/646,787, which is a continuation of the '599 patent and the immediate parent of the present application.

To provide support for the claims and comply with MPEP 608.01(i), amendments were made to the specification of the '599 patent for submission in the present specification, which included adding both text and new Figs. 12 through 49G from the '599 appendix, primarily

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related to different embodiments of various instructions that the invention is capable of executing. Many of these specific instructions are illustrated in new Figs. 31A through 47C, which are reproduced directly from the '599 appendix. Text corresponding to Figs. 31A through 47C is derived from the '599 appendix and describes the specific processor instructions set forth in those figures.

Pending claims 1-39 are fully supported by the '840 patent and its appendix ("the '840 appendix"), as well as by the '599 patent and the '599 appendix. Thus, claims 1-39 should be accorded an effectively filing date of August 16, 1995. Support for specific claim elements in both the '840 patent and the '599 patent is provided below.

The recited data processing system includes a bus (70) described in Fig. 5 of the '840 patent with, as also shown in FIG. 5, an external memory (74) (See also, FIG. 6, elements 88 and 90). A programmable microprocessor, as recited in claim 1, is described in the '840 patent at col. 4, lines 2-5 and in the '599 patent at col. 1, lines 56-60 and col. 15 line 9. A data path is described in the '840 patent at col. 4, lines 27-28 and in the '599 patent at col. 5, lines 8-10. As shown in Fig. 1 of the '599 patent, a cache memory 117 is arranged in communication with an external interface 118, as recited in claim 1 as well. A register file, as recited, is described in the '840 patent at col. 4, lines 33-35 and in the '599 patent at col. 4, lines 18-19. An execution unit coupled to the data path is described in the '840 patent at col. 4, lines 35-38 and in the '599 patent at col. 5, lines 44 and 51-56 with the capability to be configured to perform group instructions to produce a catenated result.

In particular, claim 1 also recites an aligned and unaligned instruction operable to copy respective data to an aligned or unaligned memory address. The capability to execute the aligned

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and unaligned data load and/or store functions, as recited in the claims, is described in the '599 Appendix at pages 142 – 149 and 150 -157.

With regard to claim 2, a set of aligned and unaligned “load” instructions are described at page 142-149; while with respect to claim 3, similar “store” instructions are described at pages 150-157 of the Appendix.

With respect to claims 4-10, the table of operation codes on page 142 of the Appendix describes for example, floating-point instructions, 128 bit instructions, 64 bit instructions, integer instructions, etc. as recited in the claims. Because these instruction may refer to aligned memory, this description in the Appendix also supports the memory arrangements recited in claims 9 and 10. With respect to claim 11, page 143 of the Appendix describes an “access disallowed by virtual address” exception when a specified memory address is not aligned.

Claims 14-26 recite claim features similar to those recited in claims 1-13 wherein claims 1-13 relate to a data processing system and claims 14-26 relate to a computer readable medium having instructions that cause such a system to perform appropriately. Claims 27-39 relate to a computer data signal that is embodied in a transmission media, wherein the instructions cause a similar system to perform operations analogous to those recited in claims 1-13 and 14-26. Accordingly, the support in the '599 Appendix and the '840 Appendix identified with regard to claims 1-13 is also applicable to claims 14-26 and claims 27-39.

As illustrated, all pending claims are supported by the '840 patent and/or the '840 appendix, and the '599 patent and/or the '599 appendix. That is, all pending claims 1-26 have a priority date back to August, 1995, which predates Van Hook. Thus, Van Hook does not qualify as a prior art reference for purposes of the Examiner's obviousness rejection. Therefore,

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Applicants respectfully request that rejections of claims 1-39 under 35 U.S.C. § 103(a) be withdrawn.

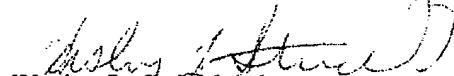
Accordingly, it is believed that all pending claims are now in condition for allowance.

Applicants therefore respectfully request an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call Applicants' representative at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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